

What is claimed is:

- 5 1. A non-magnetic surgical tool comprising:
a material having a density at least about 14 g/cm^3 and a sub-ferrous porosity;
a body portion configured from said non magnetic material said body portion having
an ergonomic handle;
a cutting surfaces contiguous to said body portion, said cutting surfaces configured
10 from said material wherein said material maintains integrity of said cutting surfaces and said
sub-ferrous porosity inhibits pathogen attachment.
2. The non-magnetic surgical tool according to claim 1 wherein said material is
nickel carbide.
- 15 3. The non-magnetic surgical tool according to claim 2 wherein said nickel
carbide has a density of about 14 to about 17 g/cm^3 .
4. The non-magnetic surgical tool according to claim 2 wherein said nickel
20 carbide has a density of about 15 g/cm^3 .
5. The non-magnetic surgical tool according to claim 1 wherein said material is
a carbide selected from the group consisting of titanium, tantalum, vanadium, zirconium,
chromium, hafnium, cerium, manganese, thorium, zirconium and niobium.
- 25 6. The non-magnetic surgical tool according to claim 3 wherein a binder
selected from the group of cobalt and nickel is used for said carbide.

7. A non-magnetic surgical tool comprising:

a carbide material having a density at least about 14 g/cm^3 and a sub-ferrous surface porosity wherein said sub-ferrous porosity excludes pathogen attachment to said surgical tool;

a body portion configured from said carbide material said body portion having an ergonomic handle wherein said ergonomic handle has been optimized to take advantage of density of said carbide material;

a cutting surfaces affixed to said body portion, said cutting surfaces configured from said carbide material having said sub-ferrous porosity thereby excluding pathogen attachment or entrapment wherein said carbide material maintains integrity of said cutting surfaces reducing excess trauma to tissue during use of said surgical tool.

8. A non-magnetic surgical tool comprising:

a body portion having an ergonomic handle wherein said handle is configured from nickel carbide having a density of about 14 g/cm^3 and a sub-ferrous porosity wherein said ergonomics of said handle have been optimized to take advantage of the density said nickel carbide;

cutting surfaces affixed to said body portion, said cutting surfaces configured from nickel carbide having a density of about 14 g/cm^3 and a sub-ferrous porosity said sub-ferrous porosity having a tendency to exclude pathogens.

9. A method of making a trauma reduced surgical incision comprising the steps of:

providing a surgical tool having cutting edges configured from a non-magnetic material having a density of at least about 14 g/cm^3 and a sub-ferrous porosity wherein said non-magnetic material maintains consistent integrity of said cutting edges;

cutting said tissue with said cutting edges whereby said consistent integrity of said cutting edges reduces excess tissue damage.

10. A method of making a non metallic surgical tool comprising the steps of:
providing a non-magnetic material having a density of at least about 14 g/cm³ and a
sub-ferrous porosity;

5 forming a body portion having an ergonomic handle from said non-magnetic
material;

forming cutting surfaces from said non-magnetic material said cutting surfaces
contiguous to said body portion said non-magnetic material maintains cutting edge integrity
reducing frequency of sharpening and said non-magnetic material having a sub-ferrous
10 porosity said sub-ferrous porosity having a tendency to exclude pathogen attachment.

11. The method of making a non metallic surgical tool according to claim 10
wherein said non-magnetic material is nickel carbide.

15 12. The method of making a non metallic surgical tool according to claim 10
wherein said non-magnetic material is a carbide selected from the group consisting of
titanium, tantalum, vanadium, zirconium, chromium, hafnium, cerium, manganese, thorium,
zirconium and niobium, and
having a binder selected from the group of cobalt and nickel.

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13. The method of making a non metallic surgical tool according to claim 10
wherein said sub-ferrous porosity of said cutting edge is achieved by honing said edge to a
mirror like finish by rubbing the cutting edge with diamond polishing compound.

25 14. The method of making a non metallic surgical tool according to claim 10
wherein said sub-ferrous porosity of said cutting edge is below about 10-12 nm and
preferably below about 50 angstroms.

30 15. The method of making a non metallic surgical tool according to claim 10
wherein said sub-ferrous porosity facilitates physical removal of said pathogens.

16. The method of making a non metallic surgical tool according to claim 15 wherein said physical removal of said pathogens is achieved by mechanical washing of said surgical tool with compounds selected from the group consisting of formaldehyde, benzene
5 and ethanol.

17. The method of making a non metallic surgical tool according to claim 10 wherein said sub-ferrous porosity substantially reduces prion loading of said surgical tool.

10 18. The method of making a non metallic surgical tool according to claim 10 wherein hot isostatic pressing of said non-magnetic material increases the density of said non-magnetic material thereby reducing surface porosity of said non-magnetic material.